MARCH/FY06

HUNTER ARMY AIRFIELD
Georgia

Army Defense Environmental
Restoration Program
Installation Action Plan

Final 31 March 2006

Table of Contents

Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multi-year Cleanup Program for an installation. The plan will identify environmental cleanup requirements at each site or area of concern, and proposes a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

In an effort to coordinate planning information between the IRP manager, AEC, installations, executing agencies, regulatory agencies, and the public, an IAP has been completed for Hunter AAP. The IAP is used to track requirements, schedules and budgets for all major Army installation restoration programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

The following persons contributed to the formulation and completion of this Installation Action Plan at the IAP Workshop held January 10-13, 2006:

USAEC - IERD

USAEC

USACE- Savannah

CC - Ft. Stewart

EEI - IRP Support

USACE- Savannah

EEI - IRP Support

Ft. Stewart - DPW

IMA - SERO

EEI - IRP Manager

USACE- Savannah

Acronyms & Abbreviations

AAF	Army Airfield
AAFES	Army, Air Force Exchange Services
ACL	Alternate Concentration Level
AEDB-R	Army Environmental Database - Restoration
AST	Aboveground Storage Tank
AVGAS	Aviation Gasoline
bgs	below ground surface
Bldg	Building
BRAC	Base Realignment and Closure
BTEX	Benzene, Toluene, Ethylbenzene, and Xylene
CAP	Corrective Action Plan
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CMI	Corrective Measures Implementation
CO	Consent Order
COE	U.S. Army Corps of Engineers
COL	Colonel
CS	Confirmatory Sampling
CSR	Compliance Status Report
CTC	Cost-To-Complete
cy	Cubic Yards
DA	Department of Army
DAACG	Departure/Arrival Air Control Group
DCE	1,2-Dichloroethylene
DD	Decision Document
DERA	Defense Environmental Restoration Account (currently called ER,A)
DPT	Direct Push Technology
DPW	Directorate of Public Works
DRMO	Defense Reutilization & Marketing Office
ENRD	Environmental Natural Resources Division
EPA	United States Environmental Protection Agency
ER,A	Environmental Restoration, Army (formerly called DERA)
FRA	Final Remedial Action
FS	Feasibility Study
ft	foot
FY	Fiscal Year
GA	Georgia
GAEPD	Georgia Environmental Protection Division
GEPD	Georgia Department of Natural Resources, Environmental Protection Division
GW	Groundwater
GWM	Groundwater Monitoring
HAA	Hunter Army Airfield designation in AEDB-R
HAAF	Hunter Army Airfield
HQ	Headquarters
HSRA	Hazardous Site Response Act
IAP	Installation Action Plan
IMP	Implementation

INV	Investigation
IR	Information Repositories
IRA	Interim Remedial Action
IRP	Installation Restoration Program
IWQS	In-Stream Water Quality Standards
JP-4	Jet Propellant Number Four
JP-8	Jet Propellant Number Eight
LTM	Long Term Management
MCA	Military Construction Account
MCL	Maximum Contaminant Level
MILCON	Military Construction
MMRP	Military Munitions Response Program
MNA	Monitored Natural Attenuation
MOGAS	Motor Gasoline
NE	Not Evaluated
NFA	No Further Action
NFAR	No Further Action Required
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
OMA	Operations and Maintenance - Army
OWS	Oil and Water Separator
PA	Preliminary Assessment
PAH	Poly Aromatic Hydrocarbons
PBC	Performance Based Contracting
PCB	Polychlorinated Biphenyls
PCE	Perchloroethylene
PDO	Property Disposal Office
PH	Pump House
POL	Petroleum, Oil and Lubricants
POM	Program, Operation, Management
ppb	Parts per Billion
PY	Prior Year
QTR	Quarter
RA	Remedial Action
RA(C)	Remedial Action - Construction
RA(O)	Remedial Action - Operation
RAB	Restoration Advisory Board
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
REM	Removal
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy in Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation

Acronyms & Abbreviations

SAIC	Science Applications International Corporation
SI	Site Inspection
sqft	square feet
STP	Sewage Treatment Plant
SVE	Soil Vapor Extraction
SVOC	Semi-Volatile Organic Compounds
SWMU	Solid Waste Management Unit
TAPP	Technical Assistants for Public Participation
TCE	Trichloroethylene
TPH	Total Petroleum Hydrocarbons
TRC	Technical Review Committee
ug/L	Micrograms per liter
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Center
USAEHA	United States Army Environmental Hygiene Agency (currently called USACHPPM)
USAF	U.S. Air Force
USATHMA	United States Army Toxic and Hazardous Material Agency (currently called USAEC)
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
USTMP	UST Management Program
VOC	Volatile Organic Compounds

Installation Information

Installation Locale: Hunter Army Airfield (HAAF) is located on 5,400 acres of land in Chatham County, Georgia, in the southwestern part of Savannah. The airfield is bounded on the north by lightly populated areas, on the east and south by residential and light commercial areas, and on the west by the Little Ogeechee River.

Installation Mission: The mission of the Fort Stewart/Hunter Army Airfield complex is to sustain a quality of life and installation support at the level necessary for division, non-divisional, tenant, and reserve component units to accomplish their training mission.

Lead Organization: Installation Management Agency, Southeast Region

Lead Executing Agencies: Environmental Protection Agency (EPA)
Georgia Department of Natural Resources, Environmental Protection Division

Regulatory Participation:
Federal: U.S. Environmental Protection Agency, Region IV
State: Georgia Department of Natural Resources, Environmental Protection Division
- HSRA Compliance Group: HAA-01 and 15
- USTMP: All existing and former USTs (HAA-03, 03B, 09, and 13,)

National Priorities List (NPL) Status:
No NPL sites have been identified at Hunter AAF.

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status: No RAB/TRC/TAPP current at Hunter AAF. The public was last surveyed for interest in May 2003.

Installation Program Summaries
IRP

Primary Contaminants of Concern: VOCs, SVOCs, TPH, Pesticides, PCBs
Affected Media of Concern: Soil, Groundwater, Surface Water, Sediment
Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 2007
Funding to Date: (up to-FY05): $ 23,299K
Current Year Funding (FY06): $ 742K
Cost-to-Complete (FY07+): $ 5,385K

MMRP There are no MMRP sites at Hunter AAF.

BRAC There are no BRAC Sites at Hunter AAF.

Cleanup Program Summary

Installation Historic Activity: Fort Stewart became a Flight Training Center in 1966, and HAAF was acquired from the U.S. Air Force (USAF) in 1967 to support the increased need for helicopter pilot training during the Vietnam Conflict. Advanced helicopter training for Vietnamese Air Force flight students was conducted at HAAF from 1970 to 1972. Aviation training was phased out in 1973 when all aviation training was consolidated at Fort Rucker, Alabama. The 1st Battalion, 75th Infantry was activated on January 31, 1974, and Fort Stewart became a training and maneuver area providing tank, field artillery, helicopter gunnery, and small arms training for regular Army and National Guard units.

HAAF currently provides support facilities, conducts training opportunities, and assists in the mobilization and deployment of the 3d Infantry Division (Mechanized). The 24th Infantry Division (Mechanized) was formerly stationed at Fort Stewart in 1975 and was active during the Persian Gulf War in 1991. It was re-flagged as the 3d Infantry Division in May 1996.

Fort Stewart filed a Resource Conservation and Recovery Act (RCRA) notification form with the EPA for Fort Stewart and HAAF in July 1980. A RCRA Part A permit application for interim status as a generator and storage facility was filed in November 1980. Subsequently, HAAF obtained a Part A permit and was under interim status as a hazardous waste generation and storage facility. In 1983, EPA directed HAAF to file a RCRA Part B permit application and conducted a compliance inspection of HAAF. Following the compliance inspection, EPA advised the Department of Public Works (DPW) personnel to withdraw the Part B permit application for HAAF because hazardous wastes generated at HAAF are transferred to the Defense Reutilization and Marketing Office (DRMO) storage yard at Fort Stewart. Due to this fact, EPA ruled that HAAF did not require a Part A or B permit. The Part B permit for Fort Stewart was revised to include quantities of wastes generated at HAAF, which is currently classified as a Small Quantity Generator.

Current Activity:

Mission: The mission of the Fort Stewart/Hunter Army Airfield complex is to sustain a quality of life and installation support at the level necessary for division, non-divisional, tenant, and reserve component units to accomplish their training mission.

Regulatory Status:

- Public water system operations permits:

Main System (Expiration Date: May 31, 2008

- Non-community Systems (Expiration Date: July 23, 2008)
- Boiler operation permit (Expiration Date: November 12, 2007)
- NPDES Permit: Wastewater Treatment Plant (Expiration Date: February 28, 2007)

Program Progress Summaries:

IRP: Hunter AAF has 7 IRP sites that are currently receiving funding. Of those, 6 sites are in the RA(O) or LTM phase. The one site that is in the RA phase (HAA-15) is under a PBC contract.

There are no MMRP or BRAC sites at Hunter AAF.

Hunter Army Airfield

Installation Restoration Program

IRP Summary

Total AEDB-R IRP Sites/AEDB-R sites with Response Complete: 18/11

Different Site Types:

1 Fire/Crash Training Area	3 Contaminated Ground Water	1 Landfill
1 Oil Water Separator	1 Storage Area	3 Spill Site Areas
2 Above Ground Storage Tanks	5 Underground Storage Tanks	1 Waste Treatment Plant

Most Widespread Contaminants Of Concern: VOCs, SVOCs, TPH, Pesticides, PCBs

Media of Concern: Soil, Groundwater, Surface Water, Sediment

Completed Removal (REM)/Interim Remedial Action (IRA)/Remedial Action (RA):

- Removal of USTs at Bldg 728 (HAA-03) $300,000
- Removal of USTs and remediation of contaminated soil and groundwater at Bldg 133 (HAA-03B) $3,000,000
- Removal of 5,000cy of contaminated soil at the Fire Training Area (HAA-01) $875,116
- Removal of 30 USTs at Pump Houses #1, #2 and #6 (HAA-13) and in-place closure of associated pipelines and two additional USTs $500,000
- Removal of free product at Fire Training Area (HAA-01), Bldg 728 (HAA-03), Bldg 133 (HAA-03B), Pump Station #1, #2 (HAA-13)
- Bldgs 1336 and 1327 (HAA-14)
- Bldg 133 source removal (HAA-03B) $80,000

Total IRP Funding:

Prior years (up to FY05):	$ 23,299K
Current year funding (FY06:	$ 742K
Future Requirements (FY07+):	$ 5,385K
Total:	$ 29,426K

Duration of IRP:

Year of IRP Inception: 1983
Year of IRP RIP/RC: 2030
Year of IRP Completion including Long Term Management (LTM): 2030

IRP Contamination Assessment

IRP Contamination Assessment Overview: The ER,A program at HAAF focuses on investigation and remediation of eligible sites where contamination occurred due to past practices and activities conducted at the airfield. Currently, the Installation has identified sixteen of the eighteen AEDB-R sites as eligible for ER,A funding. Of the sixteen sites, nine are response complete (RC) and seven are active ER,A sites. The active ER,A sites include the Fire Training Site (HAA-01), Former USTs at Building 728 (HAA-03), Former USTs at Building 133 (HAA-03B), Bulk Fuel Facility (HAA-09), Former PDO Facility (HAA-12), Pump Houses #1, #2, and #6 (HAA-13), and the MCA Barracks site (HAA-15). The RC sites are HAA-02, 03C, 06, 07, 08, 10, 11, 14 and 16. The non-ER,A eligible sites are HAA-04 and HAA-05.

The majority of these sites (i.e., HAA-01, 03, 03B, 9, 12, 13, and 14) are primarily contaminated with petroleum hydrocarbons due to operations of the extensive fueling systems (i.e., storage, product delivery lines, and other components) that were required to support a Strategic Air Command Facility (pre-1960s) and an Army Airfield (post-1960s). These fueling systems were part of bulk tank farms, motor pool service stations, AAFES service stations, and miscellaneous support activities. Unfortunately, due to their age and lack of proper maintenance, releases to the environment have subsequently resulted. The primary contaminants of concern at these sites are BTEX and PAHs, but many sites (i.e., HAA-01, 03, 03B, and 13) also contain free phase product (i.e., LNAPL).

In addition, extensive chlorinated solvent contamination has been identified at HAAF since 1998. These sites (HAA-12, 14, 15 and 16) have been contaminated due primarily to improper maintenance practices prior to the 1970s and will require extensive investigation to determine the extent of subsurface impact and remediation to MCLs.

Beginning in the early 1980s, HAAF began implementation of numerous measures to ensure that current activities do not result in releases to the environment. The primary industrial wastes generated at HAAF are those associated with vehicle and aircraft maintenance. The waste stream includes used lubricating oil, hydraulic fluid, degreasing solvent, scrap metal, wire, and waste asbestos. Other wastes which are generated on the post include waste acid, lead-based paint, waste paint, paint sludge, polychlorinated biphenyls (PCBs) in transformer oil, plastics, pesticides, herbicides, sanitary wastes, and construction debris. USTs, which are located at a limited number of motor pools, are currently used for storage of used oil, used hydraulic fluid, used antifreeze, MOGAS, and JP-8. At most motor pools, aboveground storage tanks (ASTs) are used in lieu of USTs and are being utilized for the same purposes. If the UST/AST is being used to store a waste product, then a contractor disposes the UST/AST contents on a regular basis. If these wastes meet the Fort Stewart permit requirements, they are transported to Fort Stewart and burned as a fuel source at the Central Energy Plant (SWMU 21).

In the mid-1970s, oil/water separators were installed at the vehicle washracks on HAAF. Prior to that time, washrack wastewater was discharged untreated to the storm water drainage system. When the separators were installed, the separator effluent lines were directed to the storm drainage system. In 1986, the oil/water separator discharge lines were connected to the sanitary sewer system.

IRP Contamination Assessment

Wastewater that was formerly treated at three smaller sewage treatment plants (STPs) on the installation is now diverted to the main STP. In the past, dewatered sludge was disposed of in the base sanitary landfill, which was closed in 1980. The sludge is currently disposed of in a Subtitle D permitted landfill that is owned and operated by Waste Management, Inc. In 1991, effluent from the STP was routed to allow discharge in the Savannah River via the City of Savannah's Wilshire Street STP.

There are two landfills on HAAF, one of which is closed. The original post landfill was open from 1941 through 1980 and was used for the disposal of non-hazardous scrap metals that had no salvage value. Since 1980, all of the non-salvageable scrap metal has been transported to the City of Savannah Sanitary Landfill. A second landfill is currently in operation and is used only for inert construction debris.

In 1998, the Bulk Fuel Facility began a complete rehab and upgrade to meet 21st century standards and to ensure the facility's operating life will continue for another 50 years. The rehabbed facility has numerous "checks and balances" to ensure that failures are immediately recognized and corrected to prevent future impact to the environment. In addition, HAAF will continue to implement measures in the 21st century throughout the Installation to ensure our military missions are conducted to ensure stewardship of the environment.

IRP Cleanup Exit Strategy:

Hunter AAF has 7 IRP sites that are currently receiving funding. Of those, 2 sites are pending no further action upon approval from Georgia Environmental Protection Division. Four sites are in the RA (O) or LTM phase. And one site is in the RI phase (HAA-15) and is under a PBC contract.

1982

- Gulf Tex Engineers, Inc: Solid Waste Disposal Study of HAAF, Savannah, Georgia, Contract No. DACA-21-80-C-0111: March

1983

- ESE, Inc.: Installation Assessment of HQ, 24th Infantry Division and Fort Stewart, Georgia, Report No. 334: October

1987

- Army Environmental Hygiene Agency (AEHA): Hazardous Waste Study, No. 37-26-0127-88, Fort Stewart, Georgia: March

1988

- Army Toxic and Hazardous Materials Agency (USATHAMA): AEHA Environmental Program Review, No. 31-24-7038-89: August
- USATHAMA: Property Report

1990

- Tracer Research Corporation: Tracer Leak Test for Five Underground Storage Tanks, HAAF: March
- Tracer Research Corporation: Tracer Tight Leak Test of Four Underground Storage Tanks, HAAF: March
- Tracer Research Corporation: Shallow Soil Gas Investigation, HAAF, Buildings 133 and 710, Savannah, Georgia: July
- Tracer Research Corporation: Tracer Tight Leak Test of Two Underground Storage Tanks, HAAF: July
- HSHB-ME-WR: Synthetic Organic Chemicals Survey: August
- Hunter/ESE: Contamination Evaluation/Closure Plan, Ft Stewart Fire Training Areas: October

1991

- Army-COE, Savannah District: Phase II Site Investigation, Tactical Equipment Shop Refueling Station, Building 1343 Draft: April
- RMT, Inc.: Design Recommendation Report, Subsurface Remediation at the HAAF Base Gas Station: June
- Atlanta Testing and Engineering: Corrective Action Plan, HAAF Building 710, Contract No. DACA-21-91-D-001: October

1994

- Anderson Columbia Environmental, Inc.: Field Report, Delivery Order #33 for Removal of USTs at Bldg 728 and emergency generator tank at 117th Air National Guard: October

1995

- Phoenix Construction Services, Inc.: Engineering Remediation Report for Underground Storage Tank Removal, Building 710: January

1995 (Con't)

- Anderson Columbia Environmental, Inc.: Field Report, Delivery Order #76 for Removal of USTs at Pump Houses #1 and #2: April
- Aneptek Corporation: Underground Storage Tank Closure Report, Building 133: May
- Aneptek Corporation: Engineering Remediation Report, Underground Storage Tank Removal and Phase II Interim Remediation (Building 133), Hunter Army Airfield: June

1996

- LAW Engineering: 100 Percent Submittal Construction Specifications for Source Removal Action, Hunter Army Airfield-Fire Training Area, Savannah, Georgia: March
- Metcalf and Eddy: Final Completion Report, Former Building 133, EPD Facility No. 9025029: June
- Metcalf and Eddy: Final Completion Report, Former Building 710, EPD Facility No. 9025029: June
- Metcalf and Eddy: Final Corrective Action Plan-Part A, Phase I Site Investigation of the Airport Hydrant System (Building 728), Facility ID. No. 9025035 and 9025049: August
- Metcalf and Eddy: Final Corrective Action Plan Part B, DAACG Facility Area, EPD Facility No. 9025085: September
- Anderson Columbia Environmental, Inc.: Closure Report for Tanks 21 and 22, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tanks 23 and 24, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tanks 27 and 28, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tank 98, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tank 104, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tank 108, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tank 110, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tank 111, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tank 112, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tank 115, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tank 116, Hunter Army Airfield, Georgia
- Anderson Columbia Environmental, Inc.: Closure Report for Tank 117, Hunter Army Airfield, Georgia

1997

- Metcalf and Eddy: Final Corrective Action Plan-Part A, Pumphouse #6, EPD Facility No. 9025090: April
- Metcalf and Eddy: Final Corrective Action Plan-Part A, Pumphouse #1, EPD Facility No. 9025085: April
- Metcalf and Eddy: Final Corrective Action Plan-Part A, Pumphouse #2, EPD Facility No. 9025086: April
- Metcalf and Eddy: Final Compliance Status Report, Old Property Disposal (PDO) Yard, Hunter Army Airfield: May
- Metcalf and Eddy: Final Corrective Action Plan-Part B, Building 1310, EPD Facility No. 9025073: September
- Metcalf and Eddy: Final Corrective Action Plan-Part B, Former Building 728, EPD Facility No. 9025035 and 9025049: December

1998

- Metcalf and Eddy: Final Corrective Action Plan-Part B, Pumphouse #6, EPD Facility No. 9025090: January
- Science Applications International Corporation (SAIC): Corrective Action Plan-Part A for former HOT at Building 8593-1, HAAF, GA: September
- HAZWRAP/EarthTech: Closure Report for USTs 30, 31, and 50 (PumpHouse #1), HAAF, GA: October
- HAZWRAP/EarthTech: PDO Yard ASTs Removal Report: November
- HAZWRAP/EarthTech: Closure Report for USTs #40-#41 (PumpHouse #2), HAAF, GA: December
- HAZWRAP/EarthTech: Closure Report for USTs #82-#92 (PumpHouse #6), HAAF, GA: December

1999

- SAIC: Corrective Action Plan-Part A for Heating Oil Tank (HOT) at Bldg 725, HAAF, GA: January
- SAIC: Corrective Action Plan-Part A for UST #109, HAAF, GA: February
- SAIC: Corrective Action Plan-Part A for UST #112, HAAF, GA: February
- SAIC: Corrective Action Plan-Part A for UST #116, HAAF, GA: February
- SAIC: Corrective Action Plan-Part A for Heating Oil Tanks (HOTs) at Bldg 850 , HAAF, GA: February
- HAZWRAP/EarthTech: Corrective Action Plan-Part A for USTs #25 and #26, HAAF, GA: March
- SAIC: Corrective Action Plan-Part A for UST #108, HAAF, GA: March
- SAIC: Corrective Action Plan-Part A for USTs #21 & #22, HAAF, GA: March
- SAIC: Corrective Action Plan-Part A for USTs #27 & #28, HAAF, GA: March
- Metcalf and Eddy: Third Annual Monitoring Only Report for former USTs #17-#20, HAAF, GA: May
- Metcalf and Eddy: Third Annual Monitoring Only Report for former USTs #118X-#123X, HAAF, GA: May
- HAZWRAP/EarthTech: Closure Report for UST #129, HAAF, GA: July

1999 (Con't)

- HAZWRAP/EarthTech: Closure Report for UST #130, HAAF, GA: July
- SAIC: Soil Gas Survey Report for the Bulk Fuel Facility (HAA-09), HAAF: September
- Metcalf and Eddy: Revised Final RFI Report for the Old PDO Yard: September
- SAIC: Corrective Action Plan-Part B for UST #108, HAAF, GA: September
- Fort Stewart DPW, Environmental Branch: Closure Report for UST #29, HAAF, GA: September
- Fort Stewart DPW, Environmental Branch: Closure Report for UST #104, HAAF, GA: September
- Fort Stewart DPW, Environmental Branch: Closure Report for UST #110, HAAF, GA: September
- Fort Stewart DPW, Environmental Branch: Closure Report for UST #111, HAAF, GA: September
- Metcalf and Eddy: First Annual Monitoring Only Report for Bldg 1310 (USTs #23 and #24), HAAF, GA: October
- SAIC: Corrective Action Plan-Part B for USTs #21 and #22, HAAF, GA: October
- Fort Stewart DPW, Environmental Branch: Closure Report for UST #117, HAAF, GA: October
- Metcalf and Eddy: First Annual Monitoring Only Report for Bldg 728 (USTs #1-#16), HAAF, GA: November
- Metcalf and Eddy: First Annual Monitoring Only Report for the Fire Training Area (HAA-01), HAAF, GA: November

2000

- SAIC: Corrective Action Plan-Part B for USTs #25 and #26, HAAF, GA: February
- LAW Engineering: Final Compliance Status Report, Fire Training Area, Hunter Army Airfield, Georgia: March
- SAIC: Corrective Action Plan for the Old Property Disposal (PDO) Yard, HAAF, GA: April
- Metcalf and Eddy: Corrective Action Plan-Part B for PumpHouse #2, HAAF, GA: May
- SAIC: Fourth Annual Monitoring Only Report for former USTs #17-#20, HAAF: May
- SAIC: Fourth Annual Monitoring Only Report for former USTs #118X-#123X, HAAF, GA: May
- SAIC: Addendum #1 to the First Annual Monitoring Only Report for Bldg 1310 (USTs #23 and #24): June
- SAIC: Corrective Action Plan-Part A for the Bulk Fuel Facility, HAAF, GA: June
- SAIC: Addendum #1 to the Bldg 728 CAP-Part B Report, HAAF, GA: July
- SAIC: Corrective Action Plan-Part B for PumpHouse #1, HAAF, GA: August
- SAIC: Second Annual Monitoring Only Report for Bldg 1310 (USTs #23 and #24), HAAF, GA: October
- SAIC: First Annual Monitoring Only Report for USTs 21 and 22, HAAF, GA: December

2001

- SAIC: Fifth Semi-Annual Monitoring Only Report for Bldg 1310: March
- SAIC: Fifth Annual Monitoring Only Report for Bldg 133: May

2001 (Con't)

- SAIC: CAP-Part B for HAAF Bulk Fuel Facility: June
- SAIC: CAP-Part B Addendum for USTs 25 and 26, HAAF: June
- SAIC: First Progress Report for the Corrective Action at the PDO Yard: June
- SAIC: First Annual Monitoring Only Report for USTs 25 and 26, HAAF: July
- EarthTech: IRA Former USTs #118X-123X, Former Bldg 133: August
- SAIC: Second Annual Progress Report for Bldg 728 Pilot Study: August
- SAIC: CAP-Part B Addendum for Pumphouse #2, HAAF: September
- CAP B Addendum PH #1: September
- EarthTech: Sanitary Sewer Investigation Gannam Height & Wilson Acres: October
- EarthTech: Sanitary Sewer Investigation Bldg 1275, 1276, 1277 (EM Barracks): October
- 3rd Semiannual MO TANK 25-26: December

2002

- 1st Semiannual MO PH #1: February
- EarthTech: Facilities Design, Wastewater Treatment Plant Upgrades: April
- 6th Annual MO Bldg 133: May
- SAIC: 1st Pilot Study report for Pumphouse 2: June
- 2nd Annual MO Tank 25-26: July
- 2nd Progress Report PDO Yard: July
- SAIC: 6th Annual Monitoring Only Report for USTs 118x-123x: July
- SAIC: 3rd Corrective Action Progress Report for the Corrective Actions at the Old PDO Yard HAAF: July
- SAIC: 2nd Annual Monitoring Only report for UST 25 and 26: July
- SAIC: 3rd Semiannual Monitoring Only report for UST 25 and 26: July
- SAIC: 3rd Annual Progress Report for Former Building 728: August
- SAIC: 1st Annual Monitoring Only Report for Pumphouse 1: August
- SAIC: Semiannual Monitoring Only Report for the 21st Monitoring Event for Former UST 118x-123x: October
- SAIC: 1st Annual Monitoring Only Report for Former UST 117 Building 7002 Bulk Fuel Storage: October
- SAIC: 5th Semiannual Monitoring Only Report for UST 25 and 26: November

2003

- SAIC: 3rd Semi Annual Monitoring Only Report for Pumphouse 1: April
- SAIC: 4th Corrective Action Plan Progress Report for the Corrective Actions at the Old PDO Yard: April
- STEP: Corrective Action Work Plan for Former USTs 118x-123x: May
- SAIC: 5th Corrective Action Plan Progress Report for the Corrective Actions at the Old PDO Yard: July
- SAIC: 2nd Pilot Study report for Pumphouse 2: July
- SAIC: 1st Semiannual Monitoring Only Report for Former UST 117 Building 7002 Bulk Fuel Storage: August

2004

- SAIC: 6th Corrective Action Plan Progress Report at the Old PDO Yard : January
- SAIC: Data Summary Report for the 2003 Free Product CPT Investigation Former Pumphouse #1: January
- SAIC: 3rd Semiannual Progress Report Former Pumphouse #2: February
- HGL: Report of Findings for MCA Barracks HAA-15: July
- SAIC: 7th Corrective Action Plan Progress Report for the Old PDO Yard: August
- SAIC: 4th Semiannual Progress Report Former Pumphouse #2: August

2005

- SAIC: Addendum Compliance Status Former Fire Training Area HAA-01: April
- SAIC5th Semiannual Progress Report for Former Pumphouse #2: May
- SAIC: 3rd Annual Monitoring Only Report for Former Pumphouse #1: June
- SAIC: Correction Action Completion Report for the Old PDO Yard: August
- SAIC: Monitoring Only Report Jan. 05 Sampling Event Former Fire Training Area: August
- SAIC: 7th Semiannual Monitoring Only Report for Former Pumphouse #1: October
- SAIC: 2nd Annual Monitoring Only Report Bulk Fuel Facility: November
- SAIC: 6th Semiannual Progress Report for Former Pumphouse #2: November
- SAIC: 2nd Annual Monitoring and Free Product Removal Report for the Bulk Fuel Facility: December
- STEP: 2nd Groundwater Sampling Letter Report for the Former Building 133 Remedial Action: December

Hunter Army Airfield

Installation Restoration Program
Site Descriptions

HAA-01

FORMER FIRE TRAINING SITE (FTA) (PAGE 1 OF 2)

SITE DESCRIPTION

HAA-01 is located on the northwest corner of the runway and was used until 1991 to train fire fighters in a live fire scenario. Training sessions took place ~eight times per year and utilized 300 to 500 gallons of waste oil, solvents, and waste fuels (AVGAS and JP-4) per training session. The fire training site consisted of a 5,000sqft concrete pad, bermed on all sides, with an oil water separator and a salvaged aboveground storage tank in the center which was only used to simulate an aircraft. The bermed area contained POL-contaminated soil, and the soil on the south side of the bermed area was visibly stained from overflow. The berm was cracked in multiple locations. This site is regulated by the GA Hazardous Site Response Act (HSI #10395), and includes the TCE-contaminated area of the DAACG Area Chlorinated Solvents HAA-016.

STATUS

REGULATORY DRIVER: HSRA
RRSE: High
CONTAMINANTS OF CONCERN:
Metals, VOCs, SVOCs
MEDIA OF CONCERN:
Soil, Groundwater, Surface Water

PHASES	Start	End
PA	198301	198310
SI	198301	198310
RI	199401	200401
IRA	199712	200308
RA(C)	200406	200509
RA(O)	200510	201009

RC: 201009

In March of 1987 a preliminary contamination assessment was conducted around the fire training pad. Metals, polynuclear aromatic hydrocarbons (PAHs), and phthalates were detected in the surrounding soil. From 1990 to 1992 additional contamination assessments revealed that the surface soil and drainage ditch sediments were impacted by volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs), and the groundwater was impacted by VOCs. In the 1st quarter (QTR) of the fiscal year (FY) 1995 samples were collected as a part of the source removal design investigation. In 1997, free product was discovered in groundwater monitoring well HMW-07. During the 1st and 2nd QTR of FY 1998 an interim removal action (IRA) was conducted at the Former FTA. Soil remediation activities included the removal of all structures (i.e., simulated aircraft structure, a 20,000 gal above ground storage tank (AST), underground fuel transmission line, concrete pad / berm, oil / water separator (OWS) and 5,000 cubic yards (cy) of contaminated soil. Groundwater monitoring was initiated in FY98 and a belt skimmer (thin layer free product recovery system) was installed at HMW-07 in 2nd QTR FY99.

Investigations were conducted in 1999/2000 to further delineate the extent of soil and groundwater contamination to background levels per Georgia Environmental Protection Division (GA EPD) requirements. VOCs, SVOCs, polychlorinated biphenyls (PCBs) and pesticides were found in the soil. VOCs, SVOCs and metals were found in the groundwater. This information was summarized in the second version of the Compliance Status Report (CSR) that was submitted to GA EPD in March 2000. Review comments were received in Jan 2001 from GA EPD, requiring additional site delineation in the northeast section of the site and to the south of the site. In March 2001 GA EPD approved the background soil statistical study and also requested that further investigation be conducted of the soil and groundwater to complete the delineation of contamination.
In the 1st QTR of FY 2002, additional investigation of the soil and groundwater was conducted to complete the delineation for the third revision of the CSR. The extent of previous contaminants in the surface, subsurface soil, and groundwater were delineated. VOCs in the groundwater to the north for the Former FTA pad were not delineated. The Revised Final CSR was submitted to GA EPD June 2005.

FORMER FIRE TRAINING SITE (FTA)

In 2003 a second IRA was conducted to the free product around monitoring well HMW-07, the belt skimmer was removed prior to excavation of 200 cy of soil.

Additional investigations were conducted for groundwater and soil contamination and summarized in a revised CSR Addendum. The CSR Addendum established that four VOC constituents (1,2-DCE; benzene; cis-1,2-DCE; and vinyl chloride) were not in compliance with groundwater Risk Reduction Standard (RRS), along with naphthalene and lead that were established to be out in the Revised Final CSR. This investigation identified a TCE source unrelated to HAA-001, which is defined under HAA-016. The additional samples collected as part of the CSR Addendum defined the extent where RRS compliance is an issue. Benzene, naphthalene and lead are an issue in the Former FTA. The revised CSR and its associated Addenda was submitted to GEPD in June 2005. The CSR was amended with specific corrective action procedures in FY 2006.

DAACG Subsite: This subsite includes asphalt rubble area in a wooded low-lying site. In 2002 seventeen wells (vertical profiles) were installed to further delineate the groundwater in the DAACG Chlorinated Solvents Area and three additional permanent monitoring wells were installed. TCE degradation by-products were identified as being present in groundwater during the additional investigation for the Former FTA CSR Addendum. 1.2-DCE; cis-1,2-DCE; and vinyl chloride are considered to be a RRS compliance concern for the DAACG Chlorinated Solvent Area.

CLEANUP STRATEGY

Ten groundwater monitoring wells will be sampled semiannually to evaluate potential corrective actions in the vicinity of the Former FTA for benzene, toluene, ethylbenzene, and xylene (BTEX), Polynuclear aromatic hydrocarbons (PAHs) and lead to track the concentration of benzene, naphthalene, and lead for Type IV RRS compliance in groundwater. VOCs in the groundwater to the north for the Former FTA pad will be delineated.

In the DAACG Chlorinated Area ten groundwater monitoring wells will be sampled semiannually for VOCs in order to track the concentrations of 1,2-DCE (total) and vinyl chloride for Type IV RRS compliance.

Confirmatory soil data will be evaluated in terms of current land use and Type 4 RRS for both areas of concern. Once the groundwater Type 4 RRS is achieved, soil borings will be collected in order to confirm the degradation of contaminants. Monitoring required for both the Former FTA and the DAACG Chlorinated Solvents Area until Type IV industrial standards are met (assumes FY2010). Site will be closed and groundwater monitoring wells will be abandoned.

HAA-03
FORMER USTs AT BUILDING 728 (PAGE 1 OF 2)

SITE DESCRIPTION

HAA-003 includes 16 USTs at former Building 728 (bulk fuel farm), located near the intersection of Douglas Street and Duncan Road. The USTs were removed in 1994.

During the CAP-Part A conducted in 4th QTR FY95, free product was found at 1 permanent well at this site and a belt skimmer (free product recovery) was installed.

A CAP-Part B was conducted in FY97 and free product was encountered in 2 additional wells. The CAP-Part B report was approved in September 1998 by GEPD. The CAP-Part B report recommends that the soil contamination be addressed using Soil Vapor Extraction (SVE) and groundwater contamination be addressed using air sparging; however, pilot studies were initiated at the site in May 1999 to evaluate the effectiveness of oxygen injection (enhanced bioremediation), install additional free product recovery wells and removal systems, and to collect site specific data for design of an SVE system. The CAP Part B Addendum and First Annual Progress Report were submitted to GEPD in Aug 2000 and comments were received on April 30, 2001. This document allowed enhanced bioremediation and free product recovery to be the selected RA at the site (instead of the originally proposed SVE system). The 2nd - 4th Annual Progress Reports were submitted to GEPD in Sept 2001, Aug 2002, and Sept 2003 respectively.

The ongoing MATRIX oxygen injection system has been in operation since May 1999 and has significantly reduced the size of the dissolved plume (i.e., in May 1999 the area of benzene contamination in groundwater was 22,700 sq ft and had been reduced to 4,325 sq ft by April 2003; similarly, the area of free product encompassed 1,850 sq ft in May 1999 and by June 2001 it was all removed).

Purging and cleaning of ~3,850ft of 12 inch pipe at Line A and ~5,850ft of 8 inch pipe at Line B, both of which originated at the Former Tank Farm located at former Bldg 728 was also completed, and contaminated soil was removed from three valve box locations in FY02.

Five shallow piezometers were installed in FY03 in order to delineate contamination in groundwater surrounding existing monitoring point D-9. Currently only two wells are above the ACL of 78 ug/L (D-9 is at 569 ug/L and D-4 is at 412 ug/L). The installation of three additional oxygen injection points was completed in the 1st QTR FY04 and was contracted for the final six months of operation.

STATUS

REGULATORY DRIVER: USTMP
RRSE: High
CONTAMINANTS OF CONCERN:
VOCs, SVOCs, TPH
MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
ISC	198301	198310
INV	198301	198310
CAP	199301	200109
IRA	199304	200209
IMP(O)	200209	200410
LTM	200410	200806

RC: 200806

HAA-03
FORMER USTs AT BUILDING 728 (PAGE 2 OF 2)

In FY04 the system was decommissioned and the wells were abandoned. The MILCON Ranger Complex project is under construction and expected to be completed in FY06/07.

CLEANUP STRATEGY

Six groundwater monitoring wells will be installed and monitored semiannually (for 1 year) after the Ranger Complex construction is complete to confirm that any remaining groundwater contamination did not migrate beyond the footprint of the building. A no further action will be requested (assumes FY08), if the benzene concentrations in the new groundwater monitoring wells do not exceed the proposed ACL.

HAA-03B
FORMER USTs AT BUILDING 133 (PAGE 1 OF 2)

SITE DESCRIPTION

HAA-03B included six USTs at former Building 133 (AAFES gas station), located on Barksdale Circle. There is an underground storm water line that transects the site and is considered a "preferential pathway" for contamination migration by GEPD. The USTs and contaminated soil were removed.

A CAP was submitted to GEPD in Jan 1996 delineating site contamination that is migrating along the storm water line. Approval was received in Jan 1997 to implement long term monitoring.

In 3rd QTR FY99, free product delineation was conducted at the site and product was found to be limited to monitoring well PX-1 (~0.1 foot) and PX-1R (a sheen). A Ferret system (active bladder pump recovery) was installed in 4th QTR FY00 and was taken out of service in Feb 2001. Approximately one to two gallons of product was recovered.

STATUS

REGULATORY DRIVER: USTMP
RRSE: High
CONTAMINANTS OF CONCERN:
BTEX, Metals
MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
ISC	198301	198310
INV	198301	198310
CAP	199301	199309
IRA	199406	200103
IMP(C)	200307	200401
IMP(O)	200310	200606

RIP: 200401
RC: 200606

Groundwater monitoring is being conducted on a semi-annual basis. A progress report (4th Annual) was submitted to GEPD in 3rd QTR FY00 that summarized the site-specific fate and transport model and recommended alternate remedial levels for soil and groundwater.

A soil IRA was conducted in FY01 and removed 881cy of contaminated soil and replaced four wells. Confirmatory sampling indicated benzene in excess of 160ppb remains in soil at the bottom of the excavation.

The 5th Annual Progress Report was submitted to GEPD in 3rd QTR FY01 and recommends continued onsite monitoring and/or hot spot groundwater treatment.

In FY02, the vertical extent of the contamination was delineated. Purging and cleaning (pig & cap) of Pipeline B (funded under HAA-03) that cuts through the site was completed and the 6th Annual Monitoring-Only Report was submitted with a modified Alternate Concentration Level (ACL) of 255 ug/L. The 7th Annual Monitoring-Only Report was submitted in 3rd QTR FY03. An air sparging system was installed in 4th QTR FY03 and full-scale operation began 2nd QTR FY04. The operation of this system is contracted for a period of six months with an option for an additional six months.

The system was shut off in Dec 2004. Confirmatory samples were taken in Jan 2005. Due to a construction project at the site, the air sparging system was removed and all air sparging points. All associated groundwater monitoring wells were plugged and abandoned in late April and early 2005.

HAA-03B
FORMER USTs AT BUILDING 133 (PAGE 2 OF 2)

CLEANUP STRATEGY

Benzene concentrations in the groundwater has been consistently below the cleanup goal, it is concluded that the air sparging system was successful and a no further action has been requested and is pending approval by the GA EPD Underground Storage Tank Management Program (USTMP).

HAA-09
BULK FUEL FACILITY (PAGE 1 OF 2)

SITE DESCRIPTION

Former UST 117, Facility ID #9-025113*1 and #9-025113*2, the Bulk Fuel Farm is approximately 600 by 1,200 ft and covers an area of approximately 16.5 acres. The Bulk Fuel Farm consisted of five ASTs ranging in size from 500,000 to 1,500,000 gallons and two USTs (500 gallon defuel, 2,000 gallon emergency overflow) that were used to store JP-4, MOGAS, #2 Fuel Oil, and Aviation Gas . The USTs were removed in 1999 and two of the ASTs were removed in 2001. Currently, the facility contains three above ground storage tanks (ASTs) for the storage of jet propellant (JP)-8 with capacities of approximately 500,000 gal each. The active part of the facility (two ASTs and associated above and underground pipelines, off-loader and pump stations) were rehabilitated in 2000 for the distribution of fuel to and from the tanks and now meets all state and federal guidelines. A number of releases have occurred from this facility since its construction in 1950. A few of the releases are known to have impacted the adjacent wetlands and nearby Forest River via Lamar Canal which is located ~50 ft south of the site boundary.

STATUS

REGULATORY DRIVER: USTMP
RRSE: High
CONTAMINANTS OF CONCERN:
VOCs, SVOCs, TPH
MEDIA OF CONCERN:
Soil, Groundwater, Sediment

PHASES	Start	End
ISC	198301	198310
INV	199901	199906
CAP	199906	200205
IMP(C)	200201	200206
IMP(O)	200208	200909

RIP: 200206
RC: 200909

Soil samples were collected at this site in FY97 indicated high levels of BTEX components. Specifically, the concentration of benzene in groundwater exceeded MCLs and can be attributed to the former storage of MOGAS and AVGAS. Therefore, this site is being investigated under ER,A due to the fact that contamination is from MOGAS and AVGAS storage at the facility through 1974. A passive soil gas (GoreSorber) survey was conducted in 1st QTR FY99 and indicated high levels of petroleum contamination in soil and groundwater. A “hot spot” was detected around the AST (Facility 7009) prior to renovation and reactivation of ASTs and associated pipelines.

A CAP-Part A investigation was conducted in 2nd QTR FY00 with the report approved by GEPD USTMP in Sept 2000. A CAP-Part B investigation was performed in the 1st and 2nd QTR of FY01 identifying Release #1 and determining the extent of petroleum contamination. During the groundwater monitoring activities in July 2002 and January 2003, free phase product (1/10th of an inch) was observed in groundwater monitoring well BF-MW-E5, which is located in the vicinity of AST 7009. This tank is approximately 500 ft northeast of AST 7003, which is where the groundwater plume was being monitored. It is apparent that there were two separate releases at the Bulk Fuel Facility. Release #1 is associated with the groundwater plume in the vicinity of AST 7003 where the original semiannual monitoring only program was conducted. GA EPD USTMP granted no further action for Release #1 in the first QTR FY04. Release #2 is associated with the free product observed in well BF-MW-E5, which is in the vicinity of AST 7009, and has been assigned Facility ID #9-025113*2, and was reported to GA EPD USTMP in the 1st Annual Monitoring Report in the 4th QTR FY03.

HAA-09
BULK FUEL FACILITY (PAGE 1 OF 2)

In June 2004, three additional sentinel wells were installed around the perimeter of the containment area associated with AST 7009 to confirm that free product was not coming from an upgradient source. Free phase product recovery was initiated in June 2004.

Due to BTEX and PAH concentrations associated with Release #2 not exceeding their respective International Water Quality Standards (IWQS) and ACLs since the CAP-Part B Investigation (Release #1)-2000, it was recommended and requested in the 1st QTR FY06 that semiannual groundwater sampling be discontinued and is currently pending approval

CLEANUP STRATEGY

Release #1: Abandon ~30 wells.

Release #2: Continued passive free phase product recovery quarterly until measured levels are below regulatory cleanup levels or two consecutive pumping events (assumes FY08). Final confirmatory samples will be taken and a request for no further action will be recommended. Abandonment of all associated wells and site closeout.

HAA-12
FORMER PDO FACILITY (PAGE 1 OF 2)

SITE DESCRIPTION

The former Property Disposal Office (PDO) facility is located near the northwestern boundary of HAAF. This fenced site (136 x 300 ft) includes a 1,000sqft section currently used as the 90-day hazardous waste storage facility for HAAF. Current activities have not contributed to contamination at this site. Lead, benzene, and PCE associated with past activities have been identified in the groundwater.

A small section of the site was used as an accumulation point for used oil and off-specification JP-8. Approximately 1,100cy of contaminated soil was removed from this area in July 1998.

STATUS

REGULATORY DRIVER: RCRA
RRSE: High
CONTAMINANTS OF CONCERN:
VOCs, SVOCs
MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
RFA	199303	199401
CS	199601	199710
RFI	199701	200007
IRA	199807	199808
CMI(C)	20009	200203
CMI(O)	200210	200609

RIP: 200203
RC: 200609

In 1994, a Consent Order was signed by the Commanding General and included violations at this site. In June 1997, the Installation submitted a Compliance Status Report (CSR) to GEPD HSRA Group requesting that the site be delisted and assigned a no further action status. In Dec 1997, GEPD HSRA Group completed their review of the CSR disagreeing with the NFA recommendation. However in March 1998, HSRA turned the project over to the RCRA Compliance Group due to the outstanding consent order.

In May 1998, review comments on the final RI report were received from the RCRA Compliance Group. Four additional shallow and 3 deep wells were installed in Aug 1998, confirming the presence of benzene and PCE above their respective MCLs. A final Revised Final RI was generated and recommended the preparation of a CAP. The RFI was approved by GEPD in Dec 1999. The CAP was submitted to GEPD and was approved in July 2000.

In March 2001, Fenton's reagent was injected into the PCE plume, and confirmatory sampling indicated that PCE concentrations in 2 wells exceeded the MCL of 5ppb. Therefore, a second treatment was conducted in the vicinity of those wells in May 2001. Confirmatory sampling indicated concentrations still exceed the MCL in a small area. The treatments reduced the aerial extent of the PCE plume by ~90%. In the 2nd QTR FY02, another round of treatment (polishing step) was completed. The 2nd through the 6th CAP Progress Reports were submitted to GEPD in 1st QTR FY02, 2nd QTR FY03, 1st and 2nd QTR FY04.

The annual progress report was finalized early 2005 and remedial levels were achieved. The confirmatory sampling was conducted Apr 2005. A NFA request was submitted in late FY05.

CLEANUP STRATEGY

The injection system will be dismantled and the wells will be abandoned.

HAA-13

PUMP HOUSES #1, #2 & #6 (PAGE 1 OF 2)

SITE DESCRIPTION

This project consists of 32 USTs located at three pump houses (PH). The pump houses were taken out of service in 1973. Removal of 16 USTs located at Pump Houses #1 and #2 was completed in FY95. Fourteen of the remaining USTs at this site were removed and two defueling tanks, with all associated piping, were closed in-place in Jun 1998. In addition, the CAP-Part As was submitted to GEPD in May 97 for each PH (#1, #2, and #6) and has been approved.

STATUS

REGULATORY DRIVER: USTMP
RRSE: High
CONTAMINANTS OF CONCERN:
VOCs, SVOCs, TPH
MEDIA OF CONCERN:
Soil, Groundwater, Surface Water

PHASES	Start	End
ISC	198301	198310
INV	199606	199701
CAP	199606	200209
IRA	199503	200309
IMP(C)	200101	200309
IMP(O)	200210	203009

RC: 203009

Former Pumphouse #1 was an aviation-gas fuel island located along the east-west taxiway of HAAF that was used from about 1953 until the early 1970s. It consisted of ten 25,000-gal USTs and a 50,000-gal underground defueling tank. It was indicated in the former Pumphouse #1 CAP-Part B Report that there are two distinct and separate plumes located in the vicinity of Pumphouse #1. Release #1 is an area of soil and groundwater contamination near the DAACG Facility. Therefore the DAACG/Airfield site (HAA-11) will be conducted under this project, due to the fact that the groundwater BTEX plumes are contiguous. This area is in the vicinity of former Fuel pits 1A and 1B, located approximately 900 ft west of former building 8060 (i.e., Pumphouse #1). Release #2 is an area of soil and groundwater contamination located near the former Pumphouse #1 facility and former Fuel Pits 1C and 1D, located approximately 200 ft north of the former tank pits.

The CAP-Part B for Pumphouse #1 was approved by GEPD in Dec 00. The report recommended additional investigation be conducted in the Fuel Pit 1A / DAACG area (Release #1) to further define the extent of the free product. For Release #2 the CAP-Part B Report recommended semiannual monitoring of eight groundwater monitoring wells for BTEX. An Addendum to the CAP-Part B was done July 2002 to address the additional investigation at Release #1 July 2002. During the investigation free product in excess of 1/8 inch was observed in six wells. The CAP-Part B Addendum #1 recommended annual sampling of thirty wells annually for BTEX. Free product would be removed until it reaches agreed level designated by GA EPD. Quarterly free product reports would be submitted to GA EPD.

Beginning in June 2005, bimonthly vacuum extraction activities were initiated on approximately 50 wells located throughout Release #1 and Release #2. Free product was not observed in any of the wells associated with Release #2 prior to or following vacuum extractions activities between June and August 2005.

In 2006 in the Release #2 area in an effort to accelerate the bioremediation in this area ten additional injection wells were installed in order to have a barrier to prevent transport to ditch area (between asphalt and the grass, right along the tarmac). Oxygen-Releasing Compound

(ORC)(PermeOx® Plus) was injected into twelve wells on a quarterly basis for a period of one year. Four wells were sampled for BTEX on a quarterly basis in addition to eight groundwater wells already designated for semiannual sampling under the CAP-Part B Report. A CAP-Part B Addendum #2 was performed in order to address further delineation of Release #1.

Passive free product removal at PH #2 was started in 1st QTR FY00. The CAP-Part B for PH #2, recommending 6-phase heating treatment, was approved by GEPD in Nov 00. The field work for Six-Phase Heating (SPH) at PH #2 began in 4th QTR FY01. This system operated from the 3rd to the 4th QTR FY02 (4 months) and was shutdown in August 2002. Performance sampling and one round of confirmatory sampling was conducted in FY03 (with favorable results - below the ACL of 469 ug/L). Rebound was observed in four monitoring wells, with one well slightly above the ACL in the March 2004 sampling event. In August 2004 sampling event benzene concentrations in four wells were above the IWQS criteria and the benzene concentration in one well exceeded the ACL. Due to increasing benzene concentrations in well TMP-04R since the shutdown of the SPH system, in April of 2005 six injection well were installed around well TMP-04R and ORC (PermeOx® Plus) was injected in order to increase the oxygen content in the groundwater and stimulate natural attenuation. Vacuum extractions were also conducted in an effort to promote the flow of ORC and remove any potential free product tied up in the soil pores in the vicinity of TMP-04R. I n July of 2005 benzene concentrations in TMP-02 along with TMP-04R were above the ACL. In the Fifth Semiannual Monitoring Report it was recommended that the sampling of PAHs be discontinued from the semiannual monitoring program because concentrations have returned to below its ACL. In 2006 a new background well was installed.

A CAP-Part B for PH #6 recommending NFA was approved by GEPD in Nov 98.

CLEANUP STRATEGY

PH #1:
Release #1: Conduct active free product recovery on a quarterly basis. Monitoring will be addressed in the CAP-Part B Addendum #2. (funded FY06)

Release #2: Semiannual monitoring of eight groundwater wells will be conducted in accordance with Section III.D of the CAP-Part B Report. Free product recovery on quarterly basis. The Fate and Transport F&T modeling will be revised, as necessary, to predict the time for the concentrations to reach the IWQS and ACL as a result of natural attenuation. Once the benzene ACL in the groundwater and the benzene and chrysene ACLs in the soil have been achieved, the Monitoring Only Plan will be terminated.

PH #2: Semiannual groundwater sampling of twelve monitoring wells for BTEX. Direct Push Technology (DPT) water and soil samples in order to address contamination in the former tank pit area to the north of the plume to determine if it is migrating into the remediated area.

PH #6: is response complete.

HAA-15

MCA BARRACKS SITE (PAGE 1 OF 2)

SITE DESCRIPTION

This site is regulated by the GA Hazardous Site Response Act (HSI #10521). It is located north of Lightning Road, west of Mitchell Blvd, east of Griffen St. and south of Cook Blvd. The estimated 75 acre site contains a 10 acre man-made pond and is approximately 0.5 miles and 1.5 miles from the installation's two main potable water wells (Well #1 and Well #2 respectively), which are screened at a considerably lower depth than the contaminated surficial groundwater.

In July 2000, contamination of TCE, DCE, PCE and vinyl chloride at concentrations exceeding action levels (ppm range) were detected. The chlorinated solvent contamination extends from 6 to 50 ft bgs. Contamination has been identified in groundwater only and the source of contamination is unknown. The most probable source of contamination is former aircraft maintenance operations at Bldgs 811, 813, 843, 844 and/or 845 and/or a former fuel/de-icing fluid transfer line located in the area.

STATUS

REGULATORY DRIVER: HSRA
RRSE: High
CONTAMINANTS OF CONCERN: VOCs
MEDIA OF CONCERN: Groundwater

PHASES	Start	End
PA	199802	199909
SI	200008	200112
RI	200010	200609
RA(C)	200602	200709
LTM	200709	201209

RC: 200709

In FY01, subsurface geophysical studies were conducted to assist in defining a sampling strategy and 10 vertical profiles/ deep wells were installed in 4th QTR FY01. In FY02, additional wells were installed and purging of pipelines A & B (funded under HAA-03) were completed.

In FY04, historical investigation is ongoing but has identified the potential of a former hospital and motor pool in the area to be a possible source. Direct push screening of soil at five-foot intervals with groundwater sampling at discrete intervals from the water table to 45 ft bgs was conducted at 20 locations beyond the previously defined site boundary. TCE was identified at multiple locations. However, additional sampling will be required to determine if these are discrete or part of a continuous plume. No major source has yet been identified. The production well and pond remain uncontaminated.

An archive search was conducted in FY04 in an attempt to identify the source of the contamination. In 4th QTR FY04 a Performance-Based Contract was awarded to perform all required investigation and remedial action. A draft Project Management plan was submitted in early FY05. The field work is expected to be scheduled in summer FY05. As a HSRA site this site will be delineated to background concentrations.

HAA-15
MCA BARRACKS SITE (PAGE 2 OF 2)

CLEANUP STRATEGY

Continue the PBC efforts to provide delineation, pilot studies, and site remediation efforts. The scheduled RIP is Apr 2007. Upon completion of RIP, Hunter AAF will execute the options for RA(O) and/or LTM (up to 5 option years) and optimize the exit strategy. There is also an option for the five-year review. If compliance concentrations levels are not reached by FY11, follow on RA(O)/LTM will be continued until levels are reached.

IRP No Further Action Sites Summary

AEDB-R #	Site Title	Documentation/Reason for NFA	NFA Date
HAA-02	PCB Storage at DEH Storage Yard behind Bldg 1024	Site was accessed and no sampling required	199310
HAA-03	Former USTs at Bldg 728	System was shutdown and wells abandoned. Ranger Complex Construction	200410
HAA-03B	Former USTs at Bldg 133	Clean-up goal achieved. Received NFA from GA EPD February 8, 2006	200606
HAA-04	Sew Tri Plant	Site active not eligible	Not Eligible
HAA-05	Aircraft Wash Tracks OW Separator	Site active not eligible	Not Eligible
HAA-06	Photo Labs Bldg 1287, 332	Study complete, No cleanup required	198310
HAA-07	Former Bldg 1022 Pesticide Storage Area	Study complete, No cleanup required	198310
HAA-08	Bldg 1029 Former Pesticide Storage Area	Study complete, No cleanup required	198310
HAA10	Former Sanitary Landfill	Study complete, No cleanup required	198310
HAA-11	DAACG/Airfield Investigation	Site investigation has been combined with HAA-13	199710
HAA-12	Former PDO Yard	Clean-up goal achieved, pending NFA from GA EPD	200609
HAA-14	Former Airfield Area UST Sites	Site RC due to the site being apart of the state Monitoring Only Program for benzene.	200210
HAA-16	DAACG Area Chlorinated Solvents	Site investigation has been combined under HAA-01	200307

IRP Schedule

Initiation of IRP: 1983

Phase Completion Milestones:

1983 IRP Assessment Initiation - October
SI, Building 728, (HAA-03) - October

1987 PA/SI, Installation - April

1991 CAP, Building 710, (HAA-03) - October

1992 PA/SI, Installation - February

1993 CAP and RD, Building 710, (HAA-03) - August
Feasibility Study (FS), (HAA-01) - September
CAP & RD, Building 133, (HAA-03) - September

1994 Preliminary Assessment (PA), (HAA-12) - January
Removal Action (REM), Building 728, (HAA-03) - September
Phase I CA, Building 710, (HAA-03) - November

1995 Phase II Corrective Action (CA), Building 133, (HAA-03) - February
Removal Action (REM), Pump Stations 1 & 2 (HAA-03) - July
Removal Action (REM), Pump Station 6 (HAA-13) - July
Removal Design (REM), Building 728, (HAA-03) - October

1996 Remedial Design (RD), (HAA-01) - March
Site Investigation (SI), DAACG Site, (HAA-11) - September

1997 Remedial Action (RA), (HAA-01) - May
Site Investigation (SI), (HAA-14) - September
Remedial Action (RA), (HAA-03) - December
Remedial Design, Pump House #6 (HAA-13)

1998 SI, Pump Houses #1,#2, & #6, (HAA-13)
SI-CAP Part B, Building 728, (HAA-03)
RA (Free Product Removal), Building 728, (HAA-03)
Long Term Monitoring (LTM) @ 4 ER,A sites

1999 RI/FS at HAA-01, 09, 12, 13, 14
RD, RA at HAA-03
LTM at HAA-01, 03, 03B, 03C, 12

2000 RI/FS at HAA-01, 03, 09, 12, 13, 14
LTM at HAA-03B, 03C, 13, 14

2001 RI/FS at HAA-01, 03, 09, 13, 14, 15
RA(O) at HAA-03B
FRA at HAA-12
IRA at HAA-13
LTM at HAA-14

2002 PA/SI at HAA-16
RI/FS at HAA-01, 13, 14, 15
RA at HAA-03, 12, 13
RA(O) at HAA-03B
LTM at HAA-09

2003 RI/FS at HAA-15, 16
RA at HAA-03B, 03
RA(O) at HAA-12, 13
LTM at HAA-09, 14

2004 RI/FS at HAA-15
IRA at HAA-01, 03
IMP(O) at HAA-3B, 09, 12, 13

2005 RA (C) at HAA-01

2006 IMP (C) at HAA-03B
CMI (O) at HAA-12
RA (C) at HAA-15

Projected Record of Decision (ROD)/Decision Documents (DD) Approval Dates: FY2030

Projected Construction Completion Date of IRP and Removal from NPL: FY2030

Schedule for Next Five-Year Review: *Not Applicable*

Estimated Completion Date of IRP (including LTM phase): FY2030

Hunter Army Airfield IRP Schedule

(Based on current funding constraints)

AEDB-R#	SITE TITLE	PHASE	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
HAA-01	Fire Training Site	RA(O)									
HAA-03	Former USTs at Bldg 728	LTM									
HAA-03B	Former USTs at Bldg 133	RA(O)									
HAA-09	Bulk Fuel Facility	RA(O)									
HAA-13	Pump Houses #1, #2 & # 6	RA(O) (P1 & D)									203009
		RA(O) (PH#2)									
HAA-15	MCA Barracks Site	RA(C)									
		LTM									

Prior Year Funds

Total Funding up to FY04: $22,458K

Year	Site Information		Expenditures	FY Total
FY05	HAA-01	RAO	132.60	
	HAA-03	RAO	101.75	
	HAA-03B	RAO	75.98	
	HAA-09	RAO	168.95	
	HAA-12	RAO	117.12	
	HAA-13	RAO	204.62	
	HAA-15 (PBC)	RI	39.97	**$841K**

Total Funding up to FY05: $23,299K

Current Year Funds

Year	Site Information		Expenditures	FY Total
FY06	HAA-01	RAO	75.34	
	HAA-01	RAO	9.67	
	HAA-03	RAO	40.00	
	HAA-03B	RAO	78.00	
	HAA-09	RAO	180.00	
	HAA-09	RAO	10.00	
	HAA-12	RAO	36.00	
	HAA-13	RAO	246.73	
	HAA-13	RAO	26.27	
	HAA-15	RAC	40.00	

Total Funding FY06: **$ 742K**

Total Future Requirements: **$ 5,385K**

Total Program Cost *(from inception to completion of the IRP):* **$ 29,426K**

Community Involvement

Fort Stewart/HAAF conducted community interest surveys during FY97, FY00 and FY03 to evaluate community interest in the establishment of a Restoration Advisory Board (RAB). A public notification announcing Fort Stewart/HAAF's community interest survey for a RAB was published in *The Savannah Morning News* and *The Coastal Courier* on August 1997, June 2000 and May 2003. The individual surveys for public officials were mailed in September 1997, June 2000, and May 2003, respectively. To date, Fort Stewart/HAAF has not received sufficient response to these public notifications and mailings to warrant establishment of a RAB.

Fort Stewart/HAAF will continue to monitor the public's desire to form a RAB and will react accordingly. Surveys will be conducted on a regular basis to determine the public's interest in Hunter Army Airfield's IRP.